

## REMARKS

The present response is to the Office Action mailed in the above referenced case on April 27, 2005. Claims 1-21 are presented below for examination. Claims 1-21 are rejected under 35 U.S.C 103(a) as being unpatentable over Mizumoto et al. (6,393,299), hereinafter Mizumoto, in view of Pascoe et al. (U.S. 4,245,355), hereinafter Pascoe.

Applicant has carefully studied the prior art cited and applied by the Examiner, and the Examiner's rejections and statements of the instant office action. In response, applicant amends the claims to more particularly point out and distinctly claim the subject matter of applicant's invention regarded as patentable. Applicant further provides argument that the references provided by the Examiner, either singly or in combination, fail to teach or suggest all of the limitations of applicant's claims as amended. Applicant points out and argues the key and patentable limitations of applicant's claims which clearly and unarguably distinguish applicant's invention over that of the prior art provided.

Applicant amends the independent claims to recite frequency doubling circuitry coupled to one of the VCO's characterized in that the coupled one of the VCO's provides a different frequency to each of two of the sideband selection circuit elements. For convenience and as an aid in prosecution applicant reproduces claim 1 as amended below.

Claim 1 as amended now recites:

*1. (Currently amended) An integrated circuit (IC) for RF signals, comprising;*

*a first interface for transmitting or receiving a first number of distinct RF frequency bands in a broadband spectrum;*

*a plurality of circuit elements coupled to the first interface, one for each of the frequency bands, for up-conversion or down-conversion of the frequency bands to and from an intermediate frequency (IF);*

*a second interface coupled to said circuit elements for receiving and transmitting at the intermediate frequency (IF);*

*a second number of on-chip voltage-controlled oscillators (VCOs) coupled to the circuit elements for generating local-oscillator (LO) signals to the circuit elements for conversion between the IF frequency and the receive or transmit frequency for each band; and*

*frequency doubling circuitry coupled to one of the VCOs;*

*characterized in that the second number is smaller than the first number, and further characterized in that the coupled one of the VCOs provides a different frequency to each of two of the sideband selection circuit elements.*

Applicant's independent claims 8 and 15 recite the system and method for practicing applicant's invention in accordance with the limitations of claim 1, and have been similarly amended. Depending claims 3, 10 and 17 are herein accordingly canceled.

By the above amendments to the independent claims applicant does not admit that the references provided by the Examiner teach or suggest all of the limitations of applicant's independent claims in their original form, however, applicant's chooses to further limit the independent claims to the limitations of the canceled depending claims, and reserves the right to file similar or even broader claims in the future.

The Examiner has stated in his remarks of the instant Office Action that the reference of Mizumoto discloses substantially all of applicant's claimed limitations with the exception that Mizumoto fails to disclose or suggest that the converter is integrated on an integrated circuit, relying on the reference of Pascoe for teaching or suggesting this deficiency. The Examiner has further admitted, as per claims 3-4, 10-11 and 17-18, that the reference of Mizumoto also fails to teach or suggest frequency doubling and/or redoubling circuitry coupled to the VCO, but that such frequency doubling circuitry is notoriously well-known in the art, and the Examiner has taken Official Notice of such.


Applicant respectfully traverses the Examiner's position, and argues that such frequency doubling and/or redoubling circuitry coupled to VCO is certainly not notoriously well-known in the art, and applicant respectfully requests that the Examiner provide prior art which specifically teaches this aspect which applicant believes is new

and novel as taught applicant's invention, and now specifically recited in applicant's independent claims.

Applicant therefore believes that claims 1, 8 and 15 are now clearly and unarguably patentable over the references provided by the Examiner, either singly or in combination. Claims 2, 4-7, 9, 12-14 and 18-21, all being depending claims, are then patentable on their own merits, or at least as depended from a patentable claim.

As all of the claims standing for examination have been shown to be patentable over the art of record as amended and argued above by applicant, applicant respectfully requests reconsideration, and that the present case be passed quickly to issue. If there are any time extensions needed beyond any extension specifically requested with this response, such extension of time is hereby requested. If there are any fees due beyond any fees paid with this amendment, authorization is given to deduct such fees from deposit account 50-0534.

Respectfully Submitted,  
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